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1. A system for providing data communications between a first data device and a network switch comprising:

a pilot branch for communicating with the first data device via pilot signals when the data device is in a sleep mode;

5 a data branch for providing data communications between the first data device and the network switch when the first data device is active; and

a controller circuit for monitoring the pilot signals and for switching the first data device from the pilot branch to the data branch when the first data device becomes active based on the pilot signals.

10 2. The system as recited in claim 1 wherein the data communications are digital subscriber line communications.

3. The system as recited in claim 2 wherein the data communications are asymmetric
15 digital subscriber line communications.

4. The system as recited in claim 3 wherein the asymmetric digital subscriber line communications are asymmetric digital subscriber line lite communications.

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20 5. The system as recited in claim 1 controller circuit comprises:
a crosspoint device for switching the first data device from the pilot branch to the data branch and for switching a second data device from the data branch to the pilot branch when the first data device is switched from the pilot branch to the data branch in response to the controller, and

25 wherein the controller circuit monitors operation of the second data device and, based on the monitored operation, instructs the crosspoint device to switch the second data device.

30 6. The system as recited in claim 5 wherein the controller circuit detects when the second data device is inactive and instructs the crosspoint device to switch the second data device from the data branch to the pilot branch when the second data device is inactive.

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7. The system as recited in claim 1 wherein the controller circuit comprises:
a receiver grid for switching data communications received from the first data device to
the network switch from the pilot branch to the data branch; and
5 a transmit grid for switching data communications transmitted from the network switch
to the first data device from the pilot branch to the data branch.

8. The system as recited in claim 7 wherein the controller circuit comprises:
a controller for instructing the receiver grid and the transmit grid to switch the data
10 communications based on the pilot signals.

9. The system as recited in claim 1 wherein the pilot signals are single tone carrier
signals.

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15 10. A system for routing data transmitted over a subscriber line that couples a
communication interface and an interface circuit comprising:
a pilot circuit transmitter for transmitting a pilot signal to the communication interface;
a crosspoint circuit for receiving a wake-up signal in response to the pilot signal from
the interface circuit; and
20 a controller for determining a route of the wake-up signal and for instructing the
crosspoint circuit to transmit the wake-up signal in accordance with the determined route.

11. The system as recited in claim 10 wherein the pilot signal is a single tone carrier signal.

25 12. The system as recited in claim 10 comprising:
a data branch for providing data communications between the communication interface
and the interface circuit; and
wherein the controller instructs the crosspoint circuit to transmit the wake-up signal to
the data branch to establish the data communications between the communications interface and
30 the interface circuit.

13. The system as recited in claim 12 wherein the data branch comprises:
a XDSL transmitter for transmitting the data communications from the communication interface to the interface circuit; and

5 a XDSL receiver for receiving the data communications from the interface circuit via the communications interface.

14. The system as recited in claim 12 wherein the data communications are digital subscriber line communications.

10 15. The system as recited in claim 14 wherein the data communications are asymmetric digital subscriber line communications.

16. The system as recited in claim 14 wherein the data communications are asymmetric digital subscriber line lite communications.

17. The system as recited in claim 14 wherein the data communications are very high speed digital subscriber line communications.

Subs at 20 18. A system for selectively establishing data communications between a plurality of data devices and a network switch comprising:
a data branch for establishing the data communications between one or more of the data devices and the network switch; and
a controller circuit for detecting when each of the data devices is active or inactive and
25 for connecting active ones of the data devices to the data branch.

Subs at 19. The system as recited in claim 18 wherein the controller circuit disconnects inactive ones of the data devices from the data branch.

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5 20. The system as recited in claim 19 comprising:
a pilot branch for communicating to inactive ones of the data devices; and
wherein the controller circuit connects the inactive ones of the data devices to the pilot
branch.

10 21. The system as recited in claim 20 wherein the pilot branch communicates with the
inactive ones of the data devices through pilot signals, and
wherein the controller circuit monitors the pilot signals to detected when each of the
data devices is active or inactive.

15 22. The system as recited in claim 21 wherein the controller circuit detects whether any one
of the data devices connected to the data branch is inactive and switches the inactive one of the
data devices from the data branch to the pilot branch.

20 23. The system as recited in claim 18 wherein each of the data devices transmits a wake-up
signal when changing from inactive to active, and
wherein the controller circuit connects one of the data devices to the data branch in
response to a wake-up signal from the one of the data devices.

24. The system as recited in claim 18 wherein the data communications are digital
subscriber line communications.

25 25. The system as recited in claim 24 wherein the data communications are asymmetric
digital subscriber line communications.

26. The system as recited in claim 24 wherein the data communications are asymmetric
digital subscriber line lite communications.

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27. The system as recited in claim 18 wherein the controller circuit comprises:
a signal detector for detecting when communication signals are transmitted from
inactive ones of the data devices; and
a switch circuit for connecting the inactive ones of the data devices transmitting the
communication signals to the data branch.
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28. A method for providing data communications between a data device and a network
interface comprising the steps of:
detecting when the data device is active; and
connecting the data device to a data branch to establish data communications between
the active data device and the network interface.
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29. The method as recited in claim 28 comprising the steps of:
detecting when the data device is inactive; and
disconnection the inactive data device from the data branch.
- 20
30. The method as recited in claim 29 comprising the step of connecting the inactive data
device to a pilot branch.
- 25
31. The method as recited in claim 30 comprising the steps of:
communicating pilot signals between the inactive data device and the pilot branch; and
monitoring the pilot signals to determine when the inactive data device becomes active.
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32. The method as recited in claim 30 wherein the pilot signals are single tone carrier
signals.
33. The method as recited in claim 28 wherein the data communications are digital
subscriber line communications.

34. The method as recited in claim 33 wherein the data communications are asymmetric digital subscriber line communications.

5 35. The method as recited in claim 33 wherein the data communications are asymmetric digital subscriber line lite communications.

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10 36. The method as recited in claim 28 wherein the step of detecting comprises the step of:
detecting when a wake-up signal is transmitted between the data branch and the data device to indicate that data communications should be established.

37. The method as recited in claim 36 wherein the step of detecting when a wake-up signal comprises the step of:

detecting when a signal is sent by the data device indicating that the data device desires to send data.

15 38. The method as recited in claim 37 wherein the step of detecting when a wake-up signal comprises the step of:

detecting when a signal is sent by the data branch indicating that the data branch desires to send data to the data device.

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